

# Mankind on the way to Mars and beyond

## Orion European Service Module

For the first time, NASA will use a European built system as a critical element to power an American spacecraft.

### The Orion programme

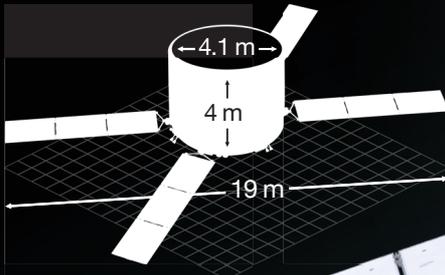


NASA is developing the capabilities needed to send humans to an asteroid and Mars.

1st European supply of critical functions for an American space mission:

- Spacecraft propulsion
- Electrical power supply
- Consumable storage (water and air)
- Thermal control

Main dimensions:



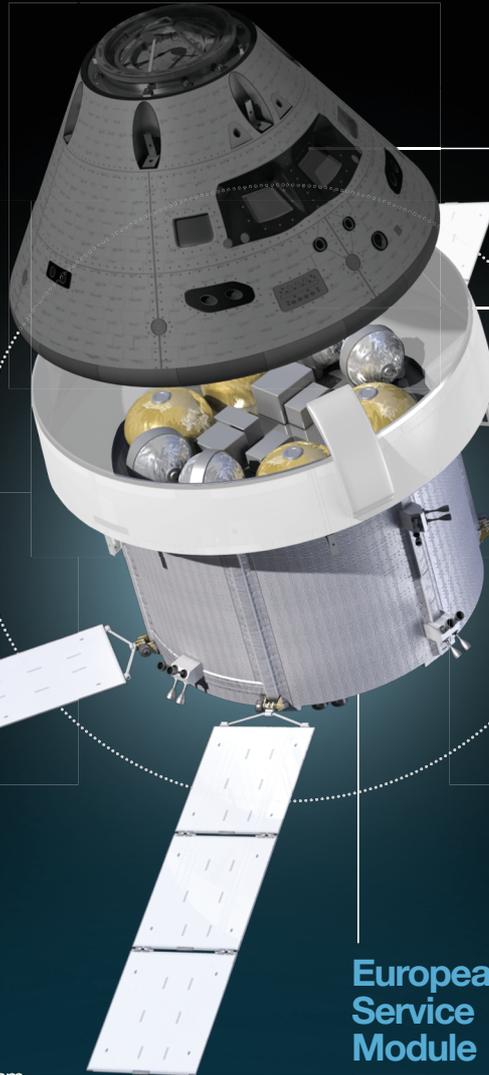
As prime contractor to ESA Airbus Defence and Space provides the following:

- Programme management
- Systems engineering
- Integration and test of the ESM
- The propulsion subsystem
- Solar arrays
- Operations support

### The Airbus Defence and Space experience

The Orion European Service Module is testimony to the excellent technologies and expertise of the Airbus Defence and Space team demonstrated by designing and building the highly successful **Automated Transfer Vehicle**, the largest supplies carrier to the **International Space Station**, that will serve as the design base.

Airbus Defence and Space built up a significant heritage in human spaceflight with ESA/NASA, coming from projects like the **Columbus laboratory** and **International Space Station** operations.



Crew Module

Crew Module Adapter

European Service Module



NASA's space launch system